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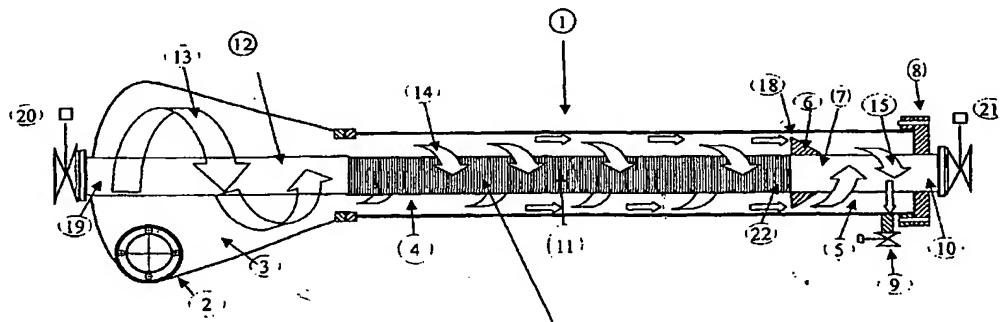
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(54) Title: APPARATUS AND METHOD FOR SEPARATING AND FILTERING PARTICLES AND ORGANISMS FROM FLOWING LIQUIDS



(57) Abstract: A device (1) for separating and filtering particles and organisms from a high volume flowing liquid operating under low pressure. The device (1) includes a conical or cylindrical shape inlet chamber (3) where liquids enter tangentially creating a circular flow without creating a vortex, the liquids accelerate into a separation and filter chamber (14) where the liquids spin around a longitudinally disposed filter element (11) in the center of the chamber (14), with the centrifugal forces separating out larger and heavier particles towards the perimeter of the separation and filter chamber (14), and where smaller particles having a specific gravity closer to that of the liquid are filtered when the liquid penetrates through the filter element wall into the center of the filter element and flows out one of the longitudinal outlets of the unit. Ultraviolet light irreparably damages bacteria, microorganisms and pathogens contained in processed ballast water and may be incorporated as part of the system.

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